

Contractual Value Engineering

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AFSC - On the Line



Value Engineering:

A proven tool

**to reduce costs and increase the
value of products and
operations.**



The Value Methodology Job Plan

→INFORMATION PHASE

- Complete data package
- Modify scope

- What is the problem or opportunity?
- Why do you consider it a problem or opportunity?
- Why is a solution necessary?
- What is the cost?
- Develop a plan to gather project data
- Investigate the project
- Verify data

→FUNCTION ANALYSIS PHASE

- Identify functions
- Classify functions
- Develop function models
- Cost functions
- Establish value index
- Select functions
- What is the task function?
- What are the basic functions?
- What are the supporting functions?

→CREATIVE PHASE

- Create quantity of ideas by function
- What else can perform the function?
- Where else can the function be performed?
- How else can the function be performed?

→EVALUATION PHASE

- Rank and rate alternative ideas
- Select ideas for development
- How must each idea work?
- What is the feasibility of implementation?
- What will be the cost?
- When will we breakeven?
- What is the best overall alternative?

→DEVELOPMENT PHASE

- Conduct benefit analysis
- Complete technical data
- Create implementation Plan
- Prepare final proposals
- How can disadvantages be overcome?
- Why is the new way better?
- Will it meet all the requirements without compromise of form, fit, or function?
- What are the annual savings?

→PRESENTATION PHASE

- Present oral report
- Prepare written report
- Who should be sold?
- How should the ideas be presented?
- What was the problem?
- What is the new way, savings, and benefits?
- How will it satisfy our customers?
- What is needed to implement the proposals?
- Who is responsible for implementing the proposals?

PRE-STUDY

- Collect user/ customer attitudes
- Complete data files
- Determine evaluation factors
- Scope the study
- Build data models
- Determine team composition

- What is to be included in the study?
- Who is best able to study the problem?
- What are the current and future requirements of the subject under study?
- What type of impediments will the team come against?

POST-STUDY

- Verify accomplishments
- Present results
- Advertise outcomes

- Did the new way work?
- How much did it cost/save?
- Did the change meet customer's expectations?

- implement changes
- Monitor status



Recent VE Conference...

Track 1 Construction	Track 2 Industry	Track 3 Education/Tech	Track 4 Case Studies
Professor, Glasgow Caledonian University, Scotland “A Quick Approach to FAST Diagrams”	TRW Washington, MI “Role of the Facilitator as Team Leader in Value Management”	Pratt & Whitney East Hartford, CT “Accelerating the Development of VM Practitioners”	Institute for Transport Sciences Budapest, Hungary “A Technical and Economical Efficiency Analysis”
	U.S. Army Rock Island, IL “VE Metrics - Growing Your Program”		East Japan Railways Tokyo, Japan “A Suggestion for Profitable App. of VE Methods Through Use...”
Boldt Consulting Appleton, WI “Opportunities to Introduce Value	General Motors Warren, MI “Using VA to Implement Lean	Applied Materials Austin, TX “Value Training Success in the	Shehezi University, & Petrochemical Works Xinjiang, China “Value Analysis

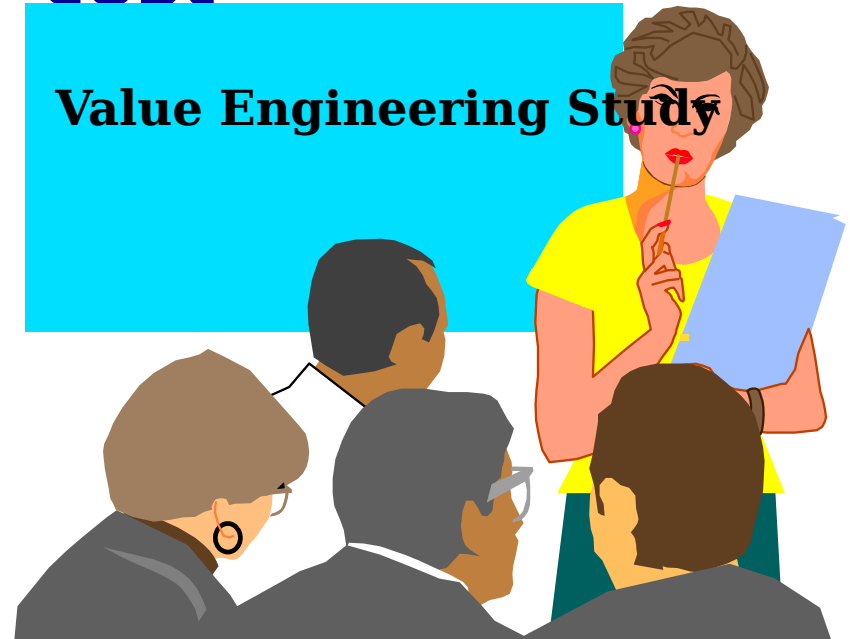


Why VE Clauses ?

- ✓ Increase use of VE techniques
- ✓ Incentives to reduce government cost

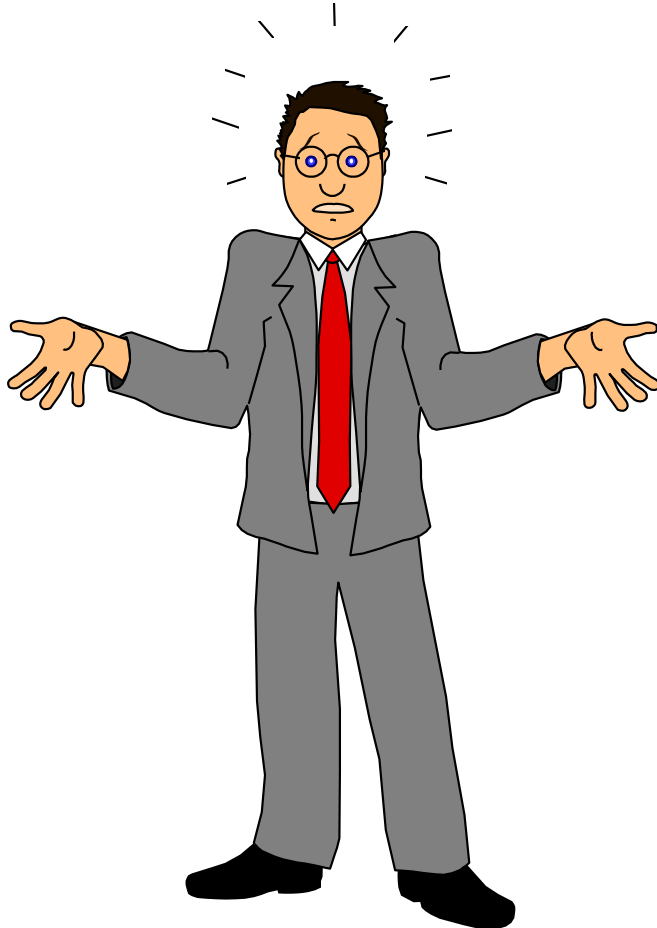


Value Engineering Study





Learning Objectives



- ✓ **VE Clause Basics**
- ✓ **What are ways to incorporate VE clauses into contracts?**
- ✓ **Joint Workshops**





Where do I find the VE clauses ?



- ✓ **FAR Part 48 - Policies and Procedures for use of clauses**
- ✓ **FAR Part 52.248 - the VE clauses**

I love a good book!





What is a VECP ?

- ✓ **A contractor submitted cost reduction proposal submitted under a VE clause**
- ✓ **Two basic VECP requirements**
 - **Requires a change to the contract to implement**
 - **Results in reducing projected cost to the agency**





Wow.....Now what do I do ?

- ✓ **Supply and Service Contracts**
 - **52.248-1**
 - **52.248-1 Alternate 1**
 - **52.248-1 Alternate 2**
 - **52.248-1 Alternate 3**
 - **Other modifications**
- ✓ **Architect-Engineer**
- ✓ **Construction**





Major VE Incentive Approaches

Mandatory

- ✓ Government funds study effort
- ✓ Contractor receives small share of savings
- ✓ 52.248-1 Alternate 1
- ✓ Greater Government Risk
- ✓ Greater Government Return

Voluntary

- ✓ Contractor can pursue studies using their own funds
- ✓ Contractor receives a large share of savings
- ✓ 52.248-1
- ✓ Greater Contractor Risk
- ✓ Greater Contractor Return

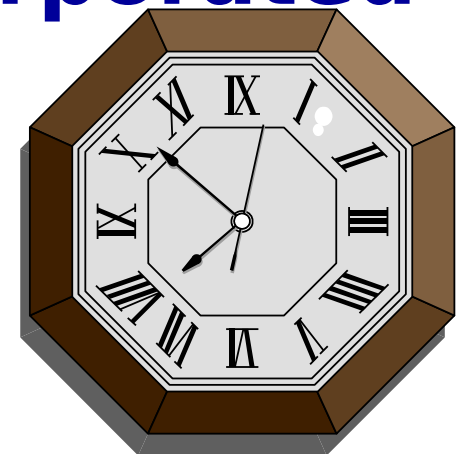
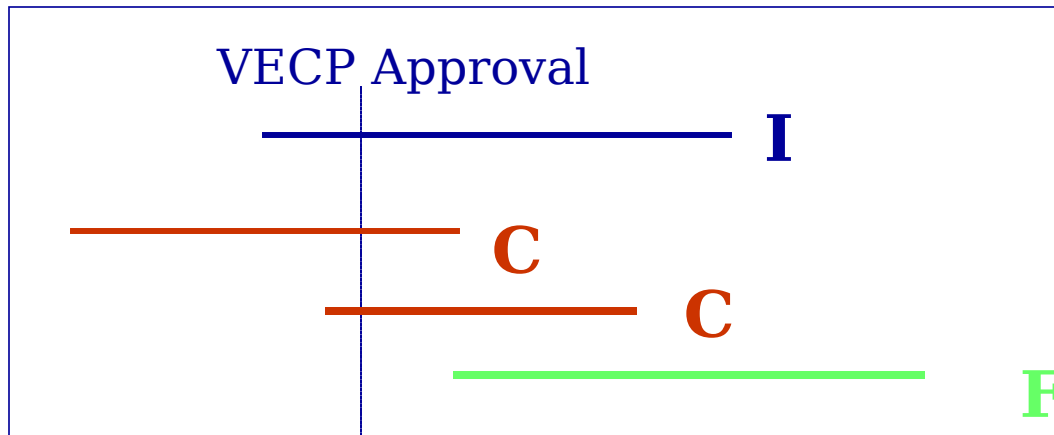




Supply and Service Contracts

FAR 52.248-1 (definitions)

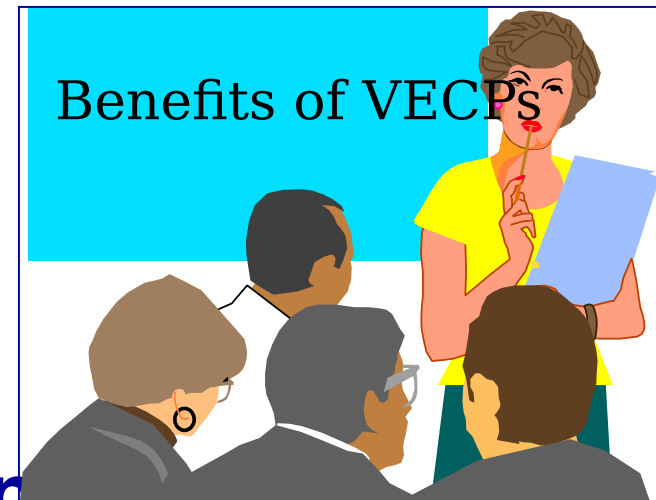
- ✓ **Instant Contract** - The contract the VECP was submitted on
- ✓ **Concurrent** - An on-going contract at time of approval
- ✓ **Future Contract** - A contract that has the VECP incorporated





Voluntary Clause

- ✓ **Most common**
- ✓ **Requires no additional Government Funding**
- ✓ **Contractor puts his funds at risk to develop VECs**
- ✓ **Show interest to be successful**
- ✓ **Clause: FAR 52.248-1**





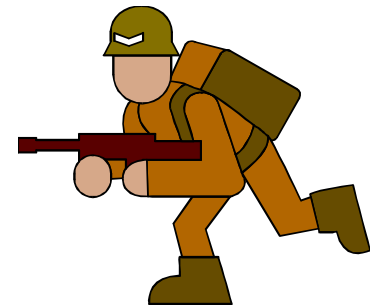
Voluntary Clause Incentives

For an approved VECP, the contractor receives :

✓ **D&I**

✓ **Share of Acquisition Savings:**

- **Instant contract savings**
- **Concurrent contract savings**
- **Future contract savings**
- **Incentives based on contract type and negotiated sharing rates and period**



✓ **Share of collateral savings**

- **Sharing rate negotiated between 20-100% of a typical year**





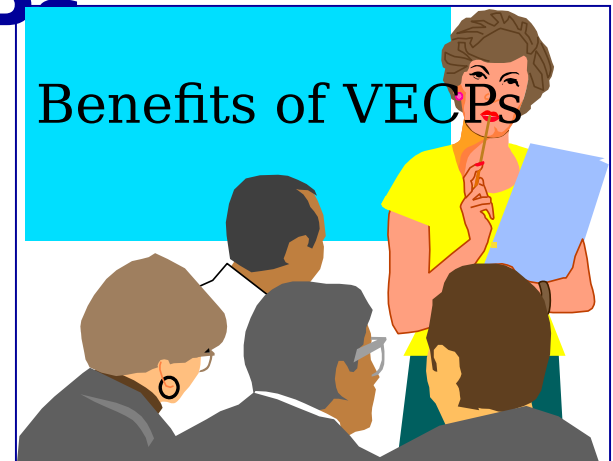
Voluntary Clause Acquisition Savings

Contract Type	Instant Contract	Concurrent & Future Contract
Fixed Price (Other than incentive)	50-75%	50-75%
Incentive (Fixed Price or Cost)	Contract Specified	50-75%
Cost Reimbursemen + (Other than incentive)	25-50%	25-50%



Mandatory Clause

- ✓ **Requires additional Government Funding.**
- ✓ **Government puts its funds at risk to develop VECPs**
- ✓ **Demonstrates Interest Program.**
- ✓ **Clause: FAR52.248-1**





Mandatory vs. Voluntary

✓ FAR Policy (48.102)

- **Must use Mandatory Clause in initial production contracts for major system acquisition programs (1st and 2nd production buys)**
- **Mandatory not required if:**
 - **Contractor has demonstrated an effective VE program in earlier phases**
 - **Contract awarded on basis of competition**



Joint Government - Contractor Cost Reduction Workshops



- ✓ **Doesn't require as much up-front cost as Mandatory Clause**
- ✓ **Demonstrates Government commitment to cost reduction**
- ✓ **Uses VE clause to reward contractor for investment**



Joint Government - Contractor Cost Reduction Workshops



- ✓ **Government and contractor invest time (typically at their own expense)**
- ✓ **Facilitate by Value Analysis expert**
- ✓ **Contractor can develop ideas and submit VECs**





Use VE Clauses Effectively



- ✓ **Follow Policy**
- ✓ **Show interest**
- ✓ **Use Joint workshops or partnering**
- ✓ **CONSIDER THE OPTIONS - THEN DO THE SMART THING!**



VE Contractual Incentives

Before VECP:

Contract Cost \$1,000,000

profit @ 10% 100,000

Contract Price \$1,100,000



After 20% VECP Cost Reduction: **VE Contractual Incentives**

Original Contract Cost

\$1,000,000

VECP Net Cost Savings

200,000

New Contract Cost

\$800,000

Original Contract Profit

\$100,000

50% Share of VECP Savings

\$100,000

Total Profit

\$200,000

New Contract Price

\$1,000,000



Value Engineering Contractual Incentives



- ✓ **Value Engineering Clauses provide useful flexible incentives for cost reduction.**
- ✓ **Approved VECs are good for the Government and the Contractor.**
- ✓ **THE GOVERNMENT MUSTEncourage contractors to submit VECs, and be fair and responsive when considering a VEC for approval.**
- ✓ **Utilize Joint Government/Contractor VE workshops.**

